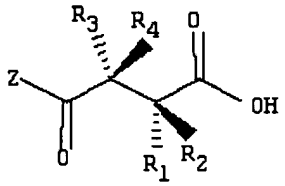
CLAIMS

What is claimed is:

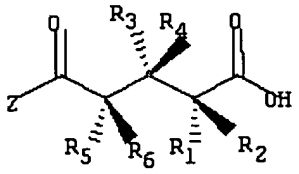
1. A compound of general formula Z-OC (C $R_{n1}R_{n2}$) -CO-Z wherein Z = OH or NH_2 and n1 = n2 =1 to 8.

2. A compound as claimed in claim 1 having a structure as shown below and bearing general formula ZOC-CR_3R_4-CR_1R_2-COOH wherein:Z=OH or NH_2, R_1, to R_4 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



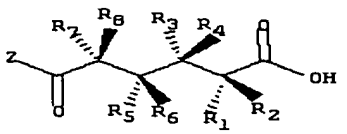
Structure 1

3. A compound as claimed in claim 1 having a structure as shown below and bearing general formula ZOC- CR_5R_6-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1 to R_6 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



Structure 2

4. A compound as claimed in claim 1 having a structure as shown below and bearing general formula ZOC-CR_7R_8-CR_5R_6-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1 to R_8 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



structure 3

5. A Compound as claimed in claim 2, wherein the compound is selected from the group consisting of:

I [L- Aspartic acid, N-Sulfonic acid],

II [2α,3-dicarboxy, propane-1-sulfonic acid],

III [2α,3-dicarboxy, propane-1-sulfate],

IV [1α,2-carboxy ethane sulfonic acid],

V [1α,2-carboxy ethane sulfate],

VI [D-aspartic acid, N-sulfonic acid],

VII [2β,3-carboxy,propane-1-sulfonic acid],

VIII [2β,3-carboxy,propane-1-sulfate],

IX [1β,2-carboxy ethane-1-sulfonic acid],

X [1β,2-carboxy ethane-1-sulfate],

XI [D-aspartic acid, 3α -sulfonic acid],

XII [D-aspartic acid, 3α-sulfate],

XIII [D-aspartic acid, 3β-sulfonic acid],

XIV [D-aspartic acid, 3β-sulfate],

XV [L-asparagine,N-sulfonic acid],

XVI [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVII [2α-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

XIX [1α-carboxy, 2-carboxamido, ethane sulfate],

XX [L-asparagine, 3α-sulfonic acid],

XXI [L-asparagine, 3α-sulfate],

XXII [L-asparagine, 3β-sulfonic acid],

XXIII [L-asparagine, 3β-sulfate,

XXIV [D-asparagine, N-sulfonic acid],

XXV [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI [2β-carboxy, 3-carboxamido, propane-1-sulfate],

XXVII [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

XXVIII [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX [D-asparagine, 3α-sulfonic acid],

XXX [D-asparagine, 3α-sulfate],

XXXI [D-asparagine, 3β-sulfonic acid],

XXXII [D-asparagine, 3β-sulfate],

XXXIII [L-glutamic acid, N-sulfonic acid],

XXXIV [2α,4-dicarboxy, butane-1-sulfonic acid],

XXXV [2α, 4-dicarboxy, butane-1-sulfate],

XXXVI [1α, 3-dicarboxy, propane sulfonic acid],

XXXVII [1α, 3-dicarboxy, propane sulfate],

XXXVIII [1β, 3-dicarboxy, propane sulfate],

XXXIX [1β, 3-dicarboxy, propane sulfonic acid],

6. A Compound as claimed in claim 3, wherein the compound is selected from the group consisting of:

I. [D-glutamic acid, N-sulfonic acid],

II. 2β, 4-dicarboxy, butane-1-sulfonic acid],

III. [2β, 4-dicarboxy, butane-1-sulfate],

IV. [D-glutamic acid, 3α-sulfonic acid],

V. [D-glutamic acid, 3α-sulfate],

VI. [D-glutamic acid, 3β-sulfonic acid],

VII. [D-glutamic acid, 3β-sulfate],

VIII. [D-glutamic acid, 4α-sulfonic acid],

IX. [D-glutamic acid, 4α-sulfate],

X. [D-glutamic acid, 4β-sulfonic acid],

XI. [D-glutamic acid, 3β-sulfate],

XII. [L-glutamine, N-sulfonic acid],

XIII. [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XIV. [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XV. [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVI. [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XVII. [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XIX. [D-glutamine, N-sulfonic acid],

XX. [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI. [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXII. [D-glutamine, 3α-sulfonic acid],

XXIII. [D-glutamine, 3α-sulfate],

XXIV. [D-glutamine, 3β-sulfonic acid],

XXV. [D-glutamine, 3β-sulfate],

XXVI. [D-glutamine, 4α-sulfonic acid],

XXVII. [D-glutamine, 4α-sulfate],

XXVIII. [D-glutamine, 4β-sulfonic acid],

XXIX. [D-glutamine, 4β-sulfate],

XXX. [L-homoglutamic acid, N-sulfonic acid],

XXXI. [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXII. [Pentane-2α, 5-dicarboxy-1-sulfate],

XXXIII. [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XXXIV. [Butane-1α, 4-dicarboxy-1-sulfate],

XXXV. [D-homoglutamic acid, N-sulfonic acid],

XXXVI. [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

XXXVII. [Pentane-2β, 5-dicarboxy-1-sulfate],

XXXVIII. [Butane-1β, 4-dicarboxy-1-sulfonic acid],

XXXIX. [Butane-1β, 4-dicarboxy-1-sulfate],

7. A Compound as claimed in claim 4, wherein the compound is selected from the group consisting of

I. [D-homoglutamic acid, 3α-sulfonic acid],

II. [D-homoglutamic acid, 3α-sulfate],
III. [D-homoglutamic acid, 3β-sulfonic acid],
IV. [D-homoglutamic acid, 3β-sulfate],
V. [D-homoglutamic acid, 4α-sulfonic acid],
VI. [D-homoglutamic acid, 4α-sulfate],
VII. [D-homoglutamic acid, 4β-sulfonic acid],
VIII. [D-homoglutamic acid, 4β-sulfate],
IX. [D-homoglutamic acid, 5α-sulfate],
X. [D-homoglutamic acid, 5α-sulfate],
XI. [D-homoglutamic acid, 5β-sulfonic acid],
XII. [D-homoglutamic acid, 5β-sulfate],
XIII. [L-homoglutamine, N-sulfonic acid],
XIV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],
XV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],
XVI. [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],
XVII. [Butane-1α-carboxy, 4-carboxamido-1-sulfate],
XVIII. [D-homoglutamine, N-sulfonic acid],
XIX. [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],
XX. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],
XXI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],
XXII. [D-homoglutamine, 3α-sulfonic acid],
XXIII. [D-homoglutamine, 3α-sulfate],
XXIV. [D-homoglutamine, 3β-sulfonic acid],
XXV. [D-homoglutamine, 3β-sulfate],
XXVI. [D-homoglutamine, 4α-sulfonic acid],
XXVII. [D-homoglutamine, 4α-sulfate],
XXVIII. [D-homoglutamine, 4β-sulfonic acid],
XXIX. [D-homoglutamine, 4β-sulfate],
XXX. [D-homoglutamine, 5α-sulfonic acid],
XXXI. [D-homoglutamine, 5α-sulfate],

XXXII. [D-homoglutamine, 5β-sulfonic acid] and

XXXIII. [D-homoglutamine, 5β-sulfate].

8. Novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_3R_4-CR_1R_2-COOH as claimed in claim 2, wherein: Z=OH or NH_2, R_1, to R_4 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$

I. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1= $NHSO_3H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1= CH_2SO_3H is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1= CH_2OSO_3H is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1=SO_3H is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1=OSO_3H is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2= CH_2SO_3H is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2=SO_3H is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2=OSO_3H is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=H, R_2=NH_2, R_4=SO_3H is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=CH_2SO_3H is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1= CH_2OSO_3H is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=SO_3H is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=OSO_3H is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=H, R_2=NH_2, R_3= SO_3H is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=H, R_2=NH_2, R_3= OSO_3H is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=H, R_2=NH_2, R_4= SO_3H is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=H, R_2= NH_2, R_4= OSO_3H is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=H, R_2= CH_2SO_3H is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=H, R_2=SO_3H is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=OSO_3H$ is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3= SO_3H$ is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3= OSO_3H$ is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined.

9. Novel sulfonic acid / sulfate derivatives of the formulae $ZOC-CR_5R_6-CR_3R_4-CR_1R_2-COOH$ as claimed in claim 3, wherein: $Z=OH$ or NH_2, R_1, to R_6 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$

I. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=NHSO_3H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1= CH_2SO_3H$ is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4= R_5=R_6=H$, $R_1= SO_3H$ is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=OSO_3H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2= SO_3H$ is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2= NHSO_3H$ is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4= R_5=R_6=H, R_2= CH_2SO_3H is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4= R_5=R_6=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=SO_3H is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=OSO_3H is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4= SO_3H is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4=OSO_3H is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4= R_3=R_6=H, R_2= NH_2, R_5=SO_3H is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=H, R_2= NH_2, R_5=OSO_3H is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=SO_3H is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=OSO_3H is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4= R_5=R_6=H, R_1=CH_2SO_3H is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1= CH_2OSO_3H is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1=SO_3H is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1= OSO_3H is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= OSO_3H is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= SO_3H is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2=CH_2SO_3H is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=SO_3H is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=OSO_3H is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4=SO_3H is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4=OSO_3H is the same meaning as is before defined;

XXXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_3=R_6=H, R_2= NH_2, R_5=SO_3H is the same meaning as is before defined;

XXXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_3=R_6=H, R_2= NH_2, R_5=OSO_3H is the same meaning as is before defined;

XXXV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=SO_3H is the same meaning as is before defined;

XXXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=OSO_3H is the same meaning as is before defined.

10. Novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_7R_8-CR_5R_6-CR_3R_4-CR_1R_2-COOH as claimed in claim 4, wherein: Z=OH or NH_2, R_1, to R_8 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$

I. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1= $-CH_2SO_3H$ is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=SO_3H is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=OSO_3H is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=$NHSO_3H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=CH_2SO_3H is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=CH_2OSO_3H is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=SO_3H is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=OSO_3H is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4= R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=OSO_3H is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=R_7=R_8=H, R_2= NH_2, R_4=SO_3H is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4= R_3=R_6= R_7=R_8=H, R_2=NH_2, R_5=SO_3H is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6= R_7=R_8=H, R_2=NH_2, R_5=OSO_3H is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4= R_7=R_8=H, R_2=NH_2, R_6=SO_3H is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4= R_7=R_8=H, R_2=NH_2, R_6=OSO_3H is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=R_5=R_8=H, R_2=NH_2, R_7=SO_3H is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=R_5=R_8=H, R_2=NH_2, R_7=OSO_3H is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_6=H, R_2=NH_2, R_8=SO_3H is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_6=H, R_2=NH_2, R_8=OSO_3H is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6= R_7=R_8=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6= R_7=R_8=H, R_1=CH_2SO_3H is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6= R_7=R_8=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4= R_5=R_6=R_7=R_8=H, R_1=SO_3H is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6= R_7=R_8=H, R_1=OSO_3H is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NHSO_3H$ is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=CH_2SO_3H$ is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=SO_3H$ is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=OSO_3H$ is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XXXIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XXXIV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=R_7=R_8=$ H, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXXV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=R_7=R_8=$ H, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XXXVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;

XXXVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=OSO_3H$ is the same meaning as is before defined;

XXXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;

XXXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined;

XL. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=SO_3H$ is the same meaning as is before defined;

XLI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=OSO_3H$ is the same meaning as is before defined;

XLII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2= NH_2$, $R_8=SO_3H$ is the same meaning as is before defined;

XLIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=OSO_3H$ is the same meaning as is before defined;

11. A Compound as claimed in claim 5, wherein said compound is non-toxic salts selected from the group consisting of:

XL. [L- Aspartic acid, N-Sulfonic acid],

XLI. [2α,3-dicarboxy, propane-1-sulfonic acid],

XLII. [2α,3-dicarboxy, propane-1-sulfate],

XLIII. [1α,2-carboxy ethane sulfonic acid],

XLIV. [1α,2-carboxy ethane sulfate],

XLV. [D-aspartic acid, N-sulfonic acid],

XLVI. [2β,3-carboxy,propane-1-sulfonic acid],

XLVII. [2β,3-carboxy,propane-1-sulfate],

XLVIII. [1β,2-carboxy ethane-1-sulfonic acid],

XLIX. [1β,2-carboxy ethane-1-sulfate],

L. [D-aspartic acid, 3α -sulfonic acid],

LI. [D-aspartic acid, 3α-sulfate],

LII. [D-aspartic acid, 3β-sulfonic acid],

LIII. [D-aspartic acid, 3β-sulfate],

LIV. [L-asparagine,N-sulfonic acid],

LV. [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

LVI. [2α-carboxy, 3-carboxamido, propane-1-sulfate],

LVII. [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

LVIII. [1α-carboxy, 2-carboxamido, ethane sulfate],

LIX. [L-asparagine, 3α-sulfonic acid],

LX. [L-asparagine, 3α-sulfate],

LXI. [L-asparagine, 3β-sulfonic acid],

LXII. [L-asparagine, 3β-sulfate,

LXIII. [D-asparagine, N-sulfonic acid],

LXIV. [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

LXV. [2β-carboxy, 3-carboxamido, propane-1-sulfate],

LXVI. [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

LXVII. [1β-carboxy, 2-carboxamido, ethane sulfate],

LXVIII. [D-asparagine, 3α-sulfonic acid],

LXIX. [D-asparagine, 3α-sulfate],

LXX. [D-asparagine, 3β-sulfonic acid],

LXXI. [D-asparagine, 3β-sulfate],

LXXII. [L-glutamic acid, N-sulfonic acid],

LXXIII. [2α,4-dicarboxy, butane-1-sulfonic acid],

LXXIV. [2α, 4-dicarboxy, butane-1-sulfate],

LXXV. [1α, 3-dicarboxy, propane sulfonic acid],

LXXVI. [1α, 3-dicarboxy, propane sulfate],

LXXVII. [1β, 3-dicarboxy, propane sulfate],

LXXVIII. [1β, 3-dicarboxy, propane sulfonic acid],

12. A Compound as claimed in claim 6, wherein said compound is non-toxic salts selected from the group consisting of:

I. [D-glutamic acid, N-sulfonic acid],

II. [2β, 4-dicarboxy, butane-1-sulfonic acid],

III. [2β, 4-dicarboxy, butane-1-sulfate],

IV. [D-glutamic acid, 3α-sulfonic acid],

V. [D-glutamic acid, 3α-sulfate],

VI. [D-glutamic acid, 3β-sulfonic acid],

VII. [D-glutamic acid, 3β-sulfate],

VIII. [D-glutamic acid, 4α-sulfonic acid],

IX. [D-glutamic acid, 4α-sulfate],

X. [D-glutamic acid, 4β-sulfonic acid],

XI. [D-glutamic acid, 3β-sulfate],

XII. [L-glutamine, N-sulfonic acid],

XIII. [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XIV. [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XV. [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVI. [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XVII. [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XIX. [D-glutamine, N-sulfonic acid],

XX. [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI. [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXII. [D-glutamine, 3α-sulfonic acid],

XXIII. [D-glutamine, 3α-sulfate],

XXIV. [D-glutamine, 3β-sulfonic acid],

XXV. [D-glutamine, 3β-sulfate],

XXVI. [D-glutamine, 4α-sulfonic acid],

XXVII. [D-glutamine, 4α-sulfate],

XXVIII. [D-glutamine, 4β-sulfonic acid],

XXIX. [D-glutamine, 4β-sulfate],

XXX. [L-homoglutamic acid, N-sulfonic acid],

XXXI. [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXII. [Pentane-2α, 5-dicarboxy-1-sulfate],

XXXIII. [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XXXIV. [Butane-1α, 4-dicarboxy-1-sulfate],

XXXV. [D-homoglutamic acid, N-sulfonic acid],

XXXVI. [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

XXXVII. [Pentane-2β, 5-dicarboxy-1-sulfate],

XXXVIII. [Butane-1β, 4-dicarboxy-1-sulfonic acid],

XXXIX. [Butane-1β, 4-dicarboxy-1-sulfate],

13. A Compound as claimed in claim 7, wherein said compound is non-toxic salts selected from the group consisting of:

I. [D-homoglutamic acid, 3α-sulfonic acid],

II. [D-homoglutamic acid, 3α-sulfate],

III. [D-homoglutamic acid, 3β-sulfonic acid],

IV. [D-homoglutamic acid, 3β-sulfate],

V. [D-homoglutamic acid, 4α-sulfonic acid],

VI. [D-homoglutamic acid, 4α-sulfate],

VII. [D-homoglutamic acid, 4β-sulfonic acid],

VIII. [D-homoglutamic acid, 4β-sulfate],

IX. [D-homoglutamic acid, 5α-sulfate],

X. [D-homoglutamic acid, 5α-sulfate],

XI. [D-homoglutamic acid, 5β-sulfonic acid],

XII. [D-homoglutamic acid, 5β-sulfate],

XIII. [L-homoglutamine, N-sulfonic acid],

XIV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],

XV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],

XVI. [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],

XVII. [Butane-1α-carboxy, 4-carboxamido-1-sulfate],

XVIII. [D-homoglutamine, N-sulfonic acid],

XIX. [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],

XX. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],

XXI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],

XXII. [D-homoglutamine, 3α-sulfonic acid],

XXIII. [D-homoglutamine, 3α-sulfate],

XXIV. [D-homoglutamine, 3β-sulfonic acid],

XXV. [D-homoglutamine, 3β-sulfate],

XXVI. [D-homoglutamine, 4α-sulfonic acid],

XXVII. [D-homoglutamine, 4α-sulfate],

XXVIII. [D-homoglutamine, 4β-sulfonic acid],

XXIX. [D-homoglutamine, 4β-sulfate],

XXX. [D-homoglutamine, 5α-sulfonic acid],

XXXI. [D-homoglutamine, 5α-sulfate],

XXXII. [D-homoglutamine, 5β-sulfonic acid] and

XXXIII. [D-homoglutamine, 5β-sulfate].

14. A compound as claimed in claim 11, wherein said compound is selected from the group consisting of aspartic acid, asparagine and corresponding de-amino analogs:

I. [L- Aspartic acid, N-Sulfonic acid],

II. [2α,3-dicarboxy, propane-1-sulfonic acid],

III. [2α,3-dicarboxy, propane-1-sulfate],

IV. [1α,2-carboxy ethane sulfonic acid],

V. [1α,2-carboxy ethane sulfate],

VI. [D-aspartic acid, N-sulfonic acid],

VII. [2β,3-carboxy,propane-1-sulfonic acid],

VIII. [2β,3-carboxy,propane-1-sulfate],

IX. [1β,2-carboxy ethane-1-sulfonic acid],

X. [1β,2-carboxy ethane-1-sulfate],

XI. [D-aspartic acid, 3α -sulfonic acid],

XII. [D-aspartic acid, 3α-sulfate],

XIII. [D-aspartic acid, 3β-sulfonic acid],

XIV. [D-aspartic acid, 3β-sulfate],

XV. [L-asparagine,N-sulfonic acid],

XVI. [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVII. [2α-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

XIX. [1α-carboxy, 2-carboxamido, ethane sulfate],

XX. [L-asparagine, 3α-sulfonic acid],

XXI. [L-asparagine, 3α-sulfate],

XXII. [L-asparagine, 3β-sulfonic acid],

XXIII. [L-asparagine, 3β-sulfate,

XXIV. [D-asparagine, N-sulfonic acid],

XXV. [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI. [2β-carboxy, 3-carboxamido, propane-1-sulfate],

XXVII. [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

XXVIII. [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX. [D-asparagine, 3α-sulfonic acid],

XXX. [D-asparagine, 3α-sulfate],

XXXI. [D-asparagine, 3β-sulfonic acid],

XXXII. [D-asparagine, 3β-sulfate],

15. A compound as claimed in claim 12, wherein said compound is selected from the group consisting of glutamic acid, glutamine and corresponding de-amino analogs:

I. [L-glutamic acid, N-sulfonic acid],

II. [2α,4-dicarboxy, butane-1-sulfonic acid],

III. [2α, 4-dicarboxy, butane-1-sulfate],

IV. [1α, 3-dicarboxy, propane sulfonic acid],

V. [1α, 3-dicarboxy, propane sulfate],

VI. [1β, 3-dicarboxy, propane sulfate],

VII. [1β, 3-dicarboxy, propane sulfonic acid],

VIII. [D-glutamic acid, N-sulfonic acid],

IX. [2β, 4-dicarboxy, butane-1-sulfonic acid],

X. [2β, 4-dicarboxy, butane-1-sulfate],

XI. [D-glutamic acid, 3α-sulfonic acid],

XII. [D-glutamic acid, 3α-sulfate],

XIII. [D-glutamic acid, 3β-sulfonic acid],

XIV. [D-glutamic acid, 3β-sulfate],

XV. [D-glutamic acid, 4α-sulfonic acid],

XVI. [D-glutamic acid, 4α-sulfate],

XVII. [D-glutamic acid, 4β-sulfonic acid],

XVIII. [D-glutamic acid, 3β-sulfate],

XIX. [L-glutamine, N-sulfonic acid],

XX. [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI. [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XXII. [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXIII. [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XXIV. [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XXV. [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI. [D-glutamine, N-sulfonic acid],

XXVII. [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXVIII. [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXIX. [D-glutamine, 3α-sulfonic acid],

XXX. [D-glutamine, 3α-sulfate],

XXXI. [D-glutamine, 3β-sulfonic acid],

XXXII. [D-glutamine, 3β-sulfate],

XXXIII. [D-glutamine, 4α-sulfonic acid],

XXXIV. [D-glutamine, 4α-sulfate],

XXXV. [D-glutamine, 4β-sulfonic acid],

XXXVI. [D-glutamine, 4β-sulfate],

XXXVII. [L-homoglutamic acid, N-sulfonic acid],

XXXVIII. [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXIX. [Pentane-2α, 5-dicarboxy-1-sulfate],

XL. [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XLI. [Butane-1α, 4-dicarboxy-1-sulfate],

16. A compound as claimed in claim 13, wherein said compound is selected from the group consisting of homoglutamic acid, homoglutamine and corresponding de-amino analogs:

I. [D-homoglutamic acid, N-sulfonic acid],

II. [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

III. [Pentane-2β, 5-dicarboxy-1-sulfate],

IV. [Butane-1β, 4-dicarboxy-1-sulfonic acid],

V. [Butane-1β, 4-dicarboxy-1-sulfate],
VI. [D-homoglutamic acid, 3α-sulfonic acid],
VII. [D-homoglutamic acid, 3α-sulfate],
VIII. [D-homoglutamic acid, 3β-sulfonic acid],
IX. [D-homoglutamic acid, 3β-sulfate],
X. [D-homoglutamic acid, 4α-sulfonic acid],
XI. [D-homoglutamic acid, 4α-sulfate],
XII. [D-homoglutamic acid, 4β-sulfonic acid],
XIII. [D-homoglutamic acid, 4β-sulfate],
XIV. [D-homoglutamic acid, 5α-sulfate],
XV. [D-homoglutamic acid, 5α-sulfate],
XVI. [D-homoglutamic acid, 5β-sulfonic acid],
XVII. [D-homoglutamic acid, 5β-sulfate],
XVIII. [L-homoglutamine, N-sulfonic acid],
XIX. [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],
XX. [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],
XXI. [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],
XXII. [Butane-1α-carboxy, 4-carboxamido-1-sulfate],
XXIII. [D-homoglutamine, N-sulfonic acid],
XXIV. [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],
XXV. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],
XXVI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],
XXVII. [D-homoglutamine, 3α-sulfonic acid],
XXVIII. [D-homoglutamine, 3α-sulfate],
XXIX. [D-homoglutamine, 3β-sulfonic acid],
XXX. [D-homoglutamine, 3β-sulfate],
XXXI. [D-homoglutamine, 4α-sulfonic acid],
XXXII. [D-homoglutamine, 4α-sulfate],
XXXIII. [D-homoglutamine, 4β-sulfonic acid],
XXXIV. [D-homoglutamine, 4β-sulfate],

XXXV. [D-homoglutamine, 5α-sulfonic acid],

XXXVI. [D-homoglutamine, 5α-sulfate],

XXXVII. [D-homoglutamine, 5β-sulfonic acid] and

XXXVIII. [D-homoglutamine, 5β-sulfate].

17. A compound as claimed in claim 1,wherein incubation of BM leukocyte precursors with different concentrations of the synthetic compound increases the cell surface densities of CD11c, CD80, CD54 and CD11c to various levels with maximum up regulation at 200 mM.

18. A compound as claimed in claim 1, wherein it gives the fold increase in the levels of molecules of cells stimulated with either 15 ng/ml of GM-CSF or 200 mM of the synthetic compound at 48 h of incubation.

19. A compound as claimed in claim 1,wherein the viability of the cultures is more than 99% at the end of the incubation period at this concentration of the synthetic compound.

20. A compound as claimed in claim 1, useful to induce differentiation of dendritic cells and modulation of immune response controlled by dendritic cell.

21. A compound as claimed in claim 1, useful in vaccine formulation to prevent more efficient and faster presentation of antigens to T-cells thereby initiate primary protective Th1 immune response and help in the clearance of the pathogen.

22. A process for preparing the compounds having general formula Z-OC (C $R_{n1}R_{n2}$) - CO-Z wherein Z = OH or NH_2 and n1 = n2 =1 to 8 said process comprising the steps of:

a) reacting tertiary butyl ester of di carboxylic acid and its derivatives having carbon 1 to 10 with thionyl chloride and triethyl amine in presence of low boiling halogenated solvent at a temperature in the range of 10 to 35°C.

b) stirring the solution of step (a) unless thin layer chromatography (TLC) shows complete consumption of starting material.

c) evaporating the solvent and obtaining crude product.

d) drying the crude and adding water to the same to obtain a slurry .

e) stirring the slurry for a time period in the range of 0.5 to 3 hr,

f) adding CH_2Cl_2 and TFA to the solution and stirring the solution for about 24 hrs

g) evaporating the solvent and drying in vacuum to obtain the desired product..

24. A process as claimed in claim 22, wherein tertiary butyl ether is either mono butyl ether or di-butyl ether.

25. A process as claimed in claim 22, wherein low boiling halogenated solvent used is dichlormethane

26. A process as claimed in claim 22 wherein in step (a), dichloromethane used is free from water.

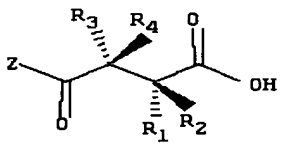
27. A process as claimed in claim 22 wherein in step (b), stirring is carried out for a period in the range of 5 to 10 hours.

28. A process as claimed in claim 22 wherein in step (d), dimethylchloride is used in the range of 3 to 10 equivalent.

29. A Pharmaceutical composition comprising the effective amount of a compound selected from the general formula Z-OC (C $R_{n1}R_{n2}$) -CO-Z wherein Z = OH or NH_2 and n1 = n2 =1 to 8 along with an additive, excipient, diluents or carrier.

30. A composition as claimed in claim 29, wherein said compound useful in vaccine formulation to prevent more efficient and faster presentation of antigens to T-cells thereby initiate primary protective Th1 immune response and help in the clearance of the pathogen.

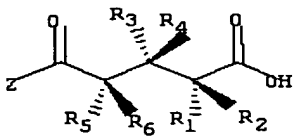
31. A composition as claimed in claim 29, wherein said compound having a structure as herein and bearing general formula ZOC-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1, to R_4 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



Structure 1

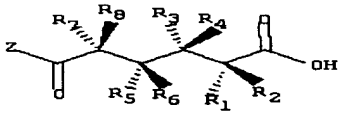
32. A composition as claimed in claim 29, wherein said compound having a structure as herein and bearing general formula ZOC- CR_5R_6-CR_3R_4-CR_1R_2-COOH

wherein: Z=OH or NH_2, R_1 to R_6 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



Structure 2

33. A composition as claimed in claim 29, wherein said compound having structure as herein and bearing general formula ZOC-CR_7R_8-CR_5R_6-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1 to R_8 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



structure 3

34. A composition as claimed in claim 29, wherein said compound in non-toxic to monocytes.

35. A composition as claimed in claim 29, wherein said compound in non-toxic to macrophages.

36. A composition as claimed in claim 29, wherein additives are different divalent metal cations such as Mg, Ca and Zn.

37. A composition as claimed in claim 29, wherein additives are amino acid/ dicarboxylic acid derivatives and their pharmaceutically acceptable selected alkali/ alkaline earth metal salts.

38. A composition as claimed in claim 29, wherein the compound is selected from the group consisting of:

I. [L- Aspartic acid, N-Sulfonic acid],

II. [2α,3-dicarboxy, propane-1-sulfonic acid],

III. [2α,3-dicarboxy, propane-1-sulfate],

IV. [1α,2-carboxy ethane sulfonic acid],

V. [1α,2-carboxy ethane sulfate],

VI. [D-aspartic acid, N-sulfonic acid],

VII. [2β,3-carboxy,propane-1-sulfonic acid],

VIII. [2β,3-carboxy,propane-1-sulfate],

IX. [1β,2-carboxy ethane-1-sulfonic acid],

X. [1β,2-carboxy ethane-1-sulfate],

XI. [D-aspartic acid, 3α -sulfonic acid],

XII. [D-aspartic acid, 3α-sulfate],

XIII. [D-aspartic acid, 3β-sulfonic acid],

XIV. [D-aspartic acid, 3β-sulfate],

XV. [L-asparagine,N-sulfonic acid],

XVI. [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVII. [2α-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

XIX. [1α-carboxy, 2-carboxamido, ethane sulfate],

XX. [L-asparagine, 3α-sulfonic acid],

XXI. [L-asparagine, 3α-sulfate],

XXII. [L-asparagine, 3β-sulfonic acid],

XXIII. [L-asparagine, 3β-sulfate,

XXIV. [D-asparagine, N-sulfonic acid],

XXV. [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI. [2β-carboxy, 3-carboxamido, propane-1-sulfate],

XXVII. [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

XXVIII. [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX. [D-asparagine, 3α-sulfonic acid],

XXX. [D-asparagine, 3α-sulfate],

XXXI. [D-asparagine, 3β-sulfonic acid],

XXXII. [D-asparagine, 3β-sulfate],

XXXIII. [L-glutamic acid, N-sulfonic acid],

XXXIV. [2α,4-dicarboxy, butane-1-sulfonic acid],

XXXV. [2α, 4-dicarboxy, butane-1-sulfate],

XXXVI. [1α, 3-dicarboxy, propane sulfonic acid],

XXXVII. [1α, 3-dicarboxy, propane sulfate],

XXXVIII. [1β, 3-dicarboxy, propane sulfate],

XXXIX. [1β, 3-dicarboxy, propane sulfonic acid],

39.A composition as claimed in claim 29, wherein the compound is selected from the group consisting of:

I. [D-glutamic acid, N-sulfonic acid],

II. 2β, 4-dicarboxy, butane-1-sulfonic acid],

III. [2β, 4-dicarboxy, butane-1-sulfate],

IV. [D-glutamic acid, 3α-sulfonic acid],

V. [D-glutamic acid, 3α-sulfate],

VI. [D-glutamic acid, 3β-sulfonic acid],

VII. [D-glutamic acid, 3β-sulfate],

VIII. [D-glutamic acid, 4α-sulfonic acid],

IX. [D-glutamic acid, 4α-sulfate],

X. [D-glutamic acid, 4β-sulfonic acid],

XI. [D-glutamic acid, 3β-sulfate],

XII. [L-glutamine, N-sulfonic acid],

XIII. [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XIV. [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XV. [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVI. [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XVII. [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XIX. [D-glutamine, N-sulfonic acid],

XX. [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI. [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXII. [D-glutamine, 3α-sulfonic acid],

XXIII. [D-glutamine, 3α-sulfate],

XXIV. [D-glutamine, 3β-sulfonic acid],

XXV. [D-glutamine, 3β-sulfate],

XXVI. [D-glutamine, 4α-sulfonic acid],

XXVII. [D-glutamine, 4α-sulfate],

XXVIII. [D-glutamine, 4β-sulfonic acid],

XXIX. [D-glutamine, 4β-sulfate],

XXX. [L-homoglutamic acid, N-sulfonic acid],

XXXI. [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXII. [Pentane-2α, 5-dicarboxy-1-sulfate],

XXXIII. [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XXXIV. [Butane-1α, 4-dicarboxy-1-sulfate],

XXXV. [D-homoglutamic acid, N-sulfonic acid],

XXXVI. [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

XXXVII. [Pentane-2β, 5-dicarboxy-1-sulfate],

XXXVIII. [Butane-1β, 4-dicarboxy-1-sulfonic acid],

XXXIX. [Butane-1β, 4-dicarboxy-1-sulfate],

40. A composition as claimed in claim 29, wherein the compound is selected from the group consisting of

I. [D-homoglutamic acid, 3α-sulfonic acid],

II. [D-homoglutamic acid, 3α-sulfate],

III. [D-homoglutamic acid, 3β-sulfonic acid],

IV. [D-homoglutamic acid, 3β-sulfate],

V. [D-homoglutamic acid, 4α-sulfonic acid],

VI. [D-homoglutamic acid, 4α-sulfate],

VII. [D-homoglutamic acid, 4β-sulfonic acid],

VIII. [D-homoglutamic acid, 4β-sulfate],

IX. [D-homoglutamic acid, 5α-sulfate],

X. [D-homoglutamic acid, 5α-sulfate],

XI. [D-homoglutamic acid, 5β-sulfonic acid],

XII. [D-homoglutamic acid, 5β-sulfate],

XIII. [L-homoglutamine, N-sulfonic acid],

XIV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],

XV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],

XVI. [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],

XVII. [Butane-1α-carboxy, 4-carboxamido-1-sulfate],

XVIII. [D-homoglutamine, N-sulfonic acid],

XIX. [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],

XX. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],

XXI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],

XXII. [D-homoglutamine, 3α-sulfonic acid],

XXIII. [D-homoglutamine, 3α-sulfate],

XXIV. [D-homoglutamine, 3β-sulfonic acid],

XXV. [D-homoglutamine, 3β-sulfate],

XXVI. [D-homoglutamine, 4α-sulfonic acid],

XXVII. [D-homoglutamine, 4α-sulfate],

XXVIII. [D-homoglutamine, 4β-sulfonic acid],

XXIX. [D-homoglutamine, 4β-sulfate],

XXX. [D-homoglutamine, 5α-sulfonic acid],

XXXI. [D-homoglutamine, 5α-sulfate],

XXXII. [D-homoglutamine, 5β-sulfonic acid] and

XXXIII. [D-homoglutamine, 5β-sulfate].

41. A composition as claimed in claim 29, wherein novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1, to R_4 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$

I. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1= $NHSO_3H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1= CH_2SO_3H is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1=SO_3H is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1=OSO_3H is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2=$NHSO_3H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2=CH_2SO_3H is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2=CH_2OSO_3H is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2=SO_3H is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2=OSO_3H is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=H, R_2=NH_2, R_4=SO_3H is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=CH_2SO_3H is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=SO_3H$ is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3= SO_3H$ is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3= OSO_3H$ is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4= SO_3H$ is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2= NH_2$, $R_4= OSO_3H$ is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2= NHSO_3H$ is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2= CH_2SO_3H$ is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2= CH_2OSO_3H$ is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=SO_3H$ is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=OSO_3H$ is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3= SO_3H$ is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3= OSO_3H$ is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined.

42. A composition as claimed in claim 29, wherein novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_5R_6-CR_3R_4-CR_1R_2-COOH, wherein: Z=OH or NH_2, R_1, to R_6 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2- OSO_3H, $NHSO_3H$

I. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1= CH_2SO_3H is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4= R_5=R_6=H, R_1= SO_3H is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1=OSO_3H is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=H, R_2=OSO_3H is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=H, R_2= SO_3H is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4= R_5=R_6=H, R_2= CH_2SO_3H is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4= R_5=R_6=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=SO_3H is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=OSO_3H is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4= SO_3H is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4=OSO_3H is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4= R_3=R_6=H, R_2= NH_2, R_5=SO_3H is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=H, R_2= NH_2, R_5=OSO_3H is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=SO_3H is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=OSO_3H is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4= R_5=R_6=H, R_1=CH_2SO_3H is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1= CH_2OSO_3H is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1=SO_3H is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1= OSO_3H is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= OSO_3H is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= SO_3H is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2=CH_2SO_3H is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_5=R_6=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_5=R_6=H, R_2=NH_2, R_3=OSO_3H is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_6=H, R_2=NH_2, R_4=SO_3H is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_6=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined;

XXXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_3=R_6=H, R_2=NH_2, R_5=SO_3H is the same meaning as is before defined;

XXXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_3=R_6=H, R_2=NH_2, R_5=OSO_3H is the same meaning as is before defined;

XXXV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_4=H, R_2=NH_2, R_6=SO_3H is the same meaning as is before defined;

XXXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_4=H, R_2=NH_2, R_6=OSO_3H is the same meaning as is before defined.

43. A composition as claimed in claim 29, wherein novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_7R_8-CR_5R_6-CR_3R_4-CR_1R_2-COOH, wherein:Z=OH or NH_2, R_1, to R_8 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$

I. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1= -CH_2SO_3H is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=SO_3H is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=OSO_3H is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=$NHSO_3H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=CH_2SO_3H is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=CH_2OSO_3H is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=SO_3H is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=OSO_3H is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4= R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=OSO_3H is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=R_7=R_8=H, R_2= NH_2, R_4=SO_3H is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4= R_3=R_6=R_7=R_8=H, R_2=NH_2, R_5=SO_3H is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=R_7=R_8=H, R_2=NH_2, R_5=OSO_3H is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_8=H, R_2=NH_2, R_6=SO_3H is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_8=H, R_2=NH_2, R_6=OSO_3H is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=R_5=R_8=H, R_2=NH_2, R_7=SO_3H is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=R_5=R_8=H, R_2=NH_2, R_7=OSO_3H is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_6=H, R_2=NH_2, R_8=SO_3H is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_6=H, R_2=NH_2, R_8=OSO_3H is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=CH_2SO_3H is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=SO_3H is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=OSO_3H is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=$NHSO_3H$ is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=CH_2SO_3H is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=SO_3H is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=OSO_3H is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XXXIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XXXIV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXXV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XXXVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;

XXXVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=OSO_3H$ is the same meaning as is before defined;

XXXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;

XXXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined;

XL. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=SO_3H$ is the same meaning as is before defined;

XLI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=OSO_3H$ is the same meaning as is before defined;

XLII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=SO_3H$ is the same meaning as is before defined;

XLIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=OSO_3H$ is the same meaning as is before defined;

44. A composition as claimed in claim 29, wherein said compound is non-toxic salts selected from the group consisting of:

I. [L- Aspartic acid, N-Sulfonic acid],
II. [2α,3-dicarboxy, propane-1-sulfonic acid],
III. [2α,3-dicarboxy, propane-1-sulfate],
IV. [1α,2-carboxy ethane sulfonic acid],
V. [1α,2-carboxy ethane sulfate],
VI. [D-aspartic acid, N-sulfonic acid],
VII. [2β,3-carboxy,propane-1-sulfonic acid],
VIII. [2β,3-carboxy,propane-1-sulfate],
IX. [1β,2-carboxy ethane-1-sulfonic acid],
X. [1β,2-carboxy ethane-1-sulfate],
XI. [D-aspartic acid, 3α -sulfonic acid],
XII. [D-aspartic acid, 3α-sulfate],
XIII. [D-aspartic acid, 3β-sulfonic acid],
XIV. [D-aspartic acid, 3β-sulfate],
XV. [L-asparagine,N-sulfonic acid],
XVI. [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],
XVII. [2α-carboxy, 3-carboxamido, propane-1-sulfate],
XVIII. [1α-carboxy, 2-carboxamido, ethane sulfonic acid],
XIX. [1α-carboxy, 2-carboxamido, ethane sulfate],
XX. [L-asparagine, 3α-sulfonic acid],
XXI. [L-asparagine, 3α-sulfate],
XXII. [L-asparagine, 3β-sulfonic acid],
XXIII. [L-asparagine, 3β-sulfate,
XXIV. [D-asparagine, N-sulfonic acid],
XXV. [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],
XXVI. [2β-carboxy, 3-carboxamido, propane-1-sulfate],
XXVII. [1β-carboxy, 2-carboxamido, ethane sulfonic acid],
XXVIII. [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX. [D-asparagine, 3α-sulfonic acid],

XXX. [D-asparagine, 3α-sulfate],

XXXI. [D-asparagine, 3β-sulfonic acid],

XXXII. [D-asparagine, 3β-sulfate],

XXXIII. [L-glutamic acid, N-sulfonic acid],

XXXIV. [2α,4-dicarboxy, butane-1-sulfonic acid],

XXXV. [2α, 4-dicarboxy, butane-1-sulfate],

XXXVI. [1α, 3-dicarboxy, propane sulfonic acid],

XXXVII. [1α, 3-dicarboxy, propane sulfate],

XXXVIII. [1β, 3-dicarboxy, propane sulfate],

XXXIX. [1β, 3-dicarboxy, propane sulfonic acid],

45. A composition as claimed in claim 29, wherein said compound is non-toxic salts selected from the group consisting of:

I. [D-glutamic acid, N-sulfonic acid],

II. [2β, 4-dicarboxy, butane-1-sulfonic acid],

III. [2β, 4-dicarboxy, butane-1-sulfate],

IV. [D-glutamic acid, 3α-sulfonic acid],

V. [D-glutamic acid, 3α-sulfate],

VI. [D-glutamic acid, 3β-sulfonic acid],

VII. [D-glutamic acid, 3β-sulfate],

VIII. [D-glutamic acid, 4α-sulfonic acid],

IX. [D-glutamic acid, 4α-sulfate],

X. [D-glutamic acid, 4β-sulfonic acid],

XI. [D-glutamic acid, 3β-sulfate],

XII. [L-glutamine, N-sulfonic acid],

XIII. [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XIV. [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XV. [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVI. [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XVII. [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XIX. [D-glutamine, N-sulfonic acid],

XX. [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI. [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXII. [D-glutamine, 3α-sulfonic acid],

XXIII. [D-glutamine, 3α-sulfate],

XXIV. [D-glutamine, 3β-sulfonic acid],

XXV. [D-glutamine, 3β-sulfate],

XXVI. [D-glutamine, 4α-sulfonic acid],

XXVII. [D-glutamine, 4α-sulfate],

XXVIII. [D-glutamine, 4β-sulfonic acid],

XXIX. [D-glutamine, 4β-sulfate],

XXX. [L-homoglutamic acid, N-sulfonic acid],

XXXI. [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXII. [Pentane-2α, 5-dicarboxy-1-sulfate],

XXXIII. [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XXXIV. [Butane-1α, 4-dicarboxy-1-sulfate],

XXXV. [D-homoglutamic acid, N-sulfonic acid],

XXXVI. [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

XXXVII. [Pentane-2β, 5-dicarboxy-1-sulfate],

XXXVIII. [Butane-1β, 4-dicarboxy-1-sulfonic acid],

XXXIX. [Butane-1β, 4-dicarboxy-1-sulfate],

45. A composition as claimed in claim 29, wherein said compound is non-toxic salts selected from the group consisting of:

I. [D-homoglutamic acid, 3α-sulfonic acid],

II. [D-homoglutamic acid, 3α-sulfate],

III. [D-homoglutamic acid, 3β-sulfonic acid],

IV. [D-homoglutamic acid, 3β-sulfate],

V. [D-homoglutamic acid, 4α-sulfonic acid],

VI. [D-homoglutamic acid, 4α-sulfate],

VII. [D-homoglutamic acid, 4β-sulfonic acid],

VIII. [D-homoglutamic acid, 4β-sulfate],

IX. [D-homoglutamic acid, 5α-sulfate],

X. [D-homoglutamic acid, 5α-sulfate],

XI. [D-homoglutamic acid, 5β-sulfonic acid],

XII. [D-homoglutamic acid, 5β-sulfate],

XIII. [L-homoglutamine, N-sulfonic acid],

XIV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],

XV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],

XVI. [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],

XVII. [Butane-1α-carboxy, 4-carboxamido-1-sulfate],

XVIII. [D-homoglutamine, N-sulfonic acid],

XIX. [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],

XX. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],

XXI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],

XXII. [D-homoglutamine, 3α-sulfonic acid],

XXIII. [D-homoglutamine, 3α-sulfate],

XXIV. [D-homoglutamine, 3β-sulfonic acid],

XXV. [D-homoglutamine, 3β-sulfate],

XXVI. [D-homoglutamine, 4α-sulfonic acid],

XXVII. [D-homoglutamine, 4α-sulfate],

XXVIII. [D-homoglutamine, 4β-sulfonic acid],

XXIX. [D-homoglutamine, 4β-sulfate],

XXX. [D-homoglutamine, 5α-sulfonic acid],

XXXI. [D-homoglutamine, 5α-sulfate],

XXXII. [D-homoglutamine, 5β-sulfonic acid] and

XXXIII. [D-homoglutamine, 5β-sulfate].

46. A composition as claimed in claim 29, wherein said compound is selected from the group consisting of aspartic acid, asparagine and corresponding de-amino analogs:

I. [L- Aspartic acid, N-Sulfonic acid],

II. [2α,3-dicarboxy, propane-1-sulfonic acid],

III. [2α,3-dicarboxy, propane-1-sulfate],

IV. [1α,2-carboxy ethane sulfonic acid],

V. [1α,2-carboxy ethane sulfate],

VI. [D-aspartic acid, N-sulfonic acid],

VII. [2β,3-carboxy,propane-1-sulfonic acid],

VIII. [2β,3-carboxy,propane-1-sulfate],

IX. [1β,2-carboxy ethane-1-sulfonic acid],

X. [1β,2-carboxy ethane-1-sulfate],

XI. [D-aspartic acid, 3α -sulfonic acid],

XII. [D-aspartic acid, 3α-sulfate],

XIII. [D-aspartic acid, 3β-sulfonic acid],

XIV. [D-aspartic acid, 3β-sulfate],

XV. [L-asparagine,N-sulfonic acid],

XVI. [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVII. [2α-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

XIX. [1α-carboxy, 2-carboxamido, ethane sulfate],

XX. [L-asparagine, 3α-sulfonic acid],

XXI. [L-asparagine, 3α-sulfate],

XXII. [L-asparagine, 3β-sulfonic acid],

XXIII. [L-asparagine, 3β-sulfate,

XXIV. [D-asparagine, N-sulfonic acid],

XXV. [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI. [2β-carboxy, 3-carboxamido, propane-1-sulfate],

XXVII. [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

XXVIII. [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX. [D-asparagine, 3α-sulfonic acid],

XXX. [D-asparagine, 3α-sulfate],

XXXI. [D-asparagine, 3β-sulfonic acid],

XXXII. [D-asparagine, 3β-sulfate],

47. A composition as claimed in claim 29, wherein said compound is selected from the group consisting of glutamic acid, glutamine and corresponding de-amino analogs:

I. [L-glutamic acid, N-sulfonic acid],

II. [2α,4-dicarboxy, butane-1-sulfonic acid],

III. [2α, 4-dicarboxy, butane-1-sulfate],

IV. [1α, 3-dicarboxy, propane sulfonic acid],

V. [1α, 3-dicarboxy, propane sulfate],

VI. [1β, 3-dicarboxy, propane sulfate],

VII. [1β, 3-dicarboxy, propane sulfonic acid],

VIII. [D-glutamic acid, N-sulfonic acid],

IX. [2β, 4-dicarboxy, butane-1-sulfonic acid],

X. [2β, 4-dicarboxy, butane-1-sulfate],

XI. [D-glutamic acid, 3α-sulfonic acid],

XII. [D-glutamic acid, 3α-sulfate],

XIII. [D-glutamic acid, 3β-sulfonic acid],

XIV. [D-glutamic acid, 3β-sulfate],

XV. [D-glutamic acid, 4α-sulfonic acid],

XVI. [D-glutamic acid, 4α-sulfate],

XVII. [D-glutamic acid, 4β-sulfonic acid],

XVIII. [D-glutamic acid, 3β-sulfate],

XIX. [L-glutamine, N-sulfonic acid],

XX. [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI. [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XXII. [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXIII. [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XXIV. [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XXV. [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI. [D-glutamine, N-sulfonic acid],

XXVII. [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXVIII. [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXIX. [D-glutamine, 3α-sulfonic acid],

XXX. [D-glutamine, 3α-sulfate],

XXXI. [D-glutamine, 3β-sulfonic acid],

XXXII. [D-glutamine, 3β-sulfate],

XXXIII. [D-glutamine, 4α-sulfonic acid],

XXXIV. [D-glutamine, 4α-sulfate],

XXXV. [D-glutamine, 4β-sulfonic acid],

XXXVI. [D-glutamine, 4β-sulfate],

XXXVII. [L-homoglutamic acid, N-sulfonic acid],

XXXVIII. [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXIX. [Pentane-2α, 5-dicarboxy-1-sulfate],

XL. [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XLI. [Butane-1α, 4-dicarboxy-1-sulfate],

48. A composition as claimed in claim 29, wherein said compound is selected from the group consisting of homoglutamic acid, homoglutamine and corresponding de-amino analogs:

I. [D-homoglutamic acid, N-sulfonic acid],

II. [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

III. [Pentane-2β, 5-dicarboxy-1-sulfate],

IV. [Butane-1β, 4-dicarboxy-1-sulfonic acid],

V. [Butane-1β, 4-dicarboxy-1-sulfate],

VI. [D-homoglutamic acid, 3α-sulfonic acid],

VII. [D-homoglutamic acid, 3α-sulfate],

VIII. [D-homoglutamic acid, 3β-sulfonic acid],

IX. [D-homoglutamic acid, 3β-sulfate],

X. [D-homoglutamic acid, 4α-sulfonic acid],

XI. [D-homoglutamic acid, 4α-sulfate],

XII. [D-homoglutamic acid, 4β-sulfonic acid],

XIII. [D-homoglutamic acid, 4β-sulfate],

XIV. [D-homoglutamic acid, 5α-sulfate],

XV. [D-homoglutamic acid, 5α-sulfate],

XVI. [D-homoglutamic acid, 5β-sulfonic acid],

XVII. [D-homoglutamic acid, 5β-sulfate],

XVIII. [L-homoglutamine, N-sulfonic acid],

XIX. [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],

XX. [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],

XXI. [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],

XXII. [Butane-1α-carboxy, 4-carboxamido-1-sulfate],

XXIII. [D-homoglutamine, N-sulfonic acid],

XXIV. [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],

XXV. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],

XXVI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],

XXVII. [D-homoglutamine, 3α-sulfonic acid],

XXVIII. [D-homoglutamine, 3α-sulfate],

XXIX. [D-homoglutamine, 3β-sulfonic acid],

XXX. [D-homoglutamine, 3β-sulfate],

XXXI. [D-homoglutamine, 4α-sulfonic acid],

XXXII. [D-homoglutamine, 4α-sulfate],

XXXIII. [D-homoglutamine, 4β-sulfonic acid],

XXXIV. [D-homoglutamine, 4β-sulfate],

XXXV. [D-homoglutamine, 5α-sulfonic acid],

XXXVI. [D-homoglutamine, 5α-sulfate],

XXXVII. [D-homoglutamine, 5β-sulfonic acid] and

XXXVIII. [D-homoglutamine, 5β-sulfate].